

Amendments to the Claims

This listing of claims shall replace all prior versions, and listings, of claims in the instant Application.

1. (Original) A blend of at least two components K1 and K2, each component being based on at least one block copolymer C1 or C2 respectively,
 - the at least one block copolymer C1 of component K1 comprising at least the unit P(A1)-P(B1)-P(A1), comprising at least one polymer block P(B1) and at least two polymer blocks P(A1), where
 - P(A1) independently at each occurrence represents homopolymer or copolymer blocks of monomers A1, the polymer blocks P(A1) each having a softening temperature in the range from +20°C to +175°C,
 - P(B1) represents a homopolymer or copolymer block of monomers B1, the polymer block P(B1) having a softening temperature in the range from -130°C to +10°C,
 - the polymer blocks P(A1) and P(B1) are not homogeneously miscible with one another,
 - the at least one block copolymer C2 of component K2 comprising at least the unit P(B2)-P(A2)-P(B2), comprising at least two polymer blocks P(B2) and at least one polymer block P(A2), where
 - P(A2) represents a homopolymer or copolymer block of monomers A2, the polymer block P(A2) having a softening temperature in the range from +20°C to +175°C,
 - P(B2) independently at each occurrence represents homopolymer or copolymer blocks of monomers B2, the polymer blocks P(B2) each having a softening temperature in the range from -130°C to +10°C,

- the polymer blocks P(A2) and P(B2) are not homogeneously miscible with one another,
- and the blend forming an at least two-phase system.

2. (Previously Presented) The blend of Claim 1, wherein component K1 is present in an amount m_{K1} and component K2 is present in an amount m_{K2} , and the amount m_{K2} of component K2 used in the blend to the amount m_{K1} of component K1 used in the blend is up to 250 parts by weight of K2 per 100 parts by weight of K1 to produce a ratio $V = m_{K2}/m_{K1} \leq 2.5$.

3. (Previously Presented) The blend of Claim 1, wherein the blocks P(A1) are compatible with the blocks P(A2) and/or their respective corresponding polymers P'(A1) with P'(A2) and/or the blocks P(B1) are compatible with the blocks P(B2) and/or their respective corresponding polymers P'(B1) with P'(B2).

4. (Previously Presented) The blend of Claim 1, wherein the polymer blocks P(A1) and the polymer blocks P(A2) and/or the polymer blocks P(B1) and the polymer blocks P(B2) possess an identical homopolymer and/or copolymer composition.

5. (Previously Presented) The blend of Claim 1, wherein the average chain length LB2 of the polymer blocks P(B2) of the block copolymer C2 does not exceed the average chain length LB1 of the polymer block P(B1) of the block copolymer C1.

6. (Previously Presented) The blend of Claim 1, wherein, with the symbol i representing 1 or 2, the polymer blocks $P(A_i)$ are present as a disperse phase in a continuous matrix of the polymer blocks $P(B_i)$, optionally as spherical or distortedly spherical domains, this condition being obtained by adjustment of the ratio V_{Li} of the average chain lengths LA_i of the polymer blocks $P(A_i)$ to the average chain lengths LB_i of the polymer blocks $P(B_i)$.

7. (Previously Presented) The blend of Claim 1, wherein as block copolymer C2 star polymers of the formula $[P(A_2)-P(B_2)]_nX$ are admixed,

- where $n = 3$ to 12 and X is a polyfunctional branching unit by which polymer arms $[P(A_2)-P(B_2)]$ are linked to one another,
- where the polymer blocks $P(A_2)$ independently at each occurrence represent homopolymer or copolymer blocks of the monomers A_2 , the polymer blocks $P(A_2)$ each having a softening temperature in the range from $+20^\circ\text{C}$ to $+175^\circ\text{C}$,
- and where the polymer blocks $P(B_2)$ independently at each occurrence represent homopolymer or copolymer blocks of the monomers B_2 , the polymer blocks $P(B_2)$ each having a softening temperature in the range from -130°C to $+10^\circ\text{C}$.

8. (Previously Presented) The blend of Claim 7, wherein n different polymer arms are present and at least two of the n polymer arms $[P(A_2)-P(B_2)]$ of the star polymers differ in their chain length and/or their chemical structure.

9. (Previously Presented) The blend of Claim 1, wherein at least one of the block copolymers C1 or C2 has a symmetrical structure such that there are polymer blocks $P(A_i)$, where i represents 1 or 2 identical in chain length and/or in chemical structure and/or there are polymer blocks $P(B_i)$ where i represents 1 or 2 identical in chain length and/or in chemical structure.

10. (Previously Presented) The blend Claim 1, wherein the block copolymer C1 has:

- a number average molecular weight M_n of between 10,000 and 600,000 g/mol,
- a polydispersity $D = M_w/M_n$ of not more than 3,
- a polymer block $P(A1)$ fraction of between 5 and 49% by weight based on the composition of the block copolymer C1

11. (Previously Presented) The blend of Claim 1, further comprising

- at least one diblock copolymer C3 of the general formula $P(A3)-P(B3)$,
 - wherein the polymer blocks $P(A3)$ independently of one another represent homopolymer or copolymer blocks of the monomers A3, the polymer blocks $P(A3)$ each having a softening temperature in the range from +20°C to +175°C,
 - and wherein the polymer blocks $P(B3)$ independently of one another represent homopolymer or copolymer blocks of the monomers B3, the polymer blocks $P(B3)$ each having a softening temperature in the range from -130°C to +10°C,
- and/or further comprising at least one polymer $P'(A4)$ and/or $P'(B4)$,
 - wherein the polymers $P'(A4)$ represent homopolymers and/or copolymers of the monomers A4, the polymers $P'(A4)$ each having a softening temperature in the range from +20°C to +175°C,

- wherein the polymers P'(B4) represent homopolymers and/or copolymers of the monomers B4, the polymers P'(B4) each having a softening temperature in the range from -130°C to +10°C,

and wherein optionally the polymers P'(A4) are miscible with the polymer blocks

P(A1), P(A2) and/or P(A3) and/or the polymers P'(A4) are miscible with the polymer blocks P(B1), P(B2) and/or P(B3).

12. (Previously Presented) The blend of Claim 11, wherein the diblock copolymer has:

- a molar mass M_n of between 5000 and 600 000 g/mol,
- a polydispersity $D = M_w/M_n$ of not more than 3,
- a polymer block P(A3) fraction of between 3 and 50% by weight, based on the diblock copolymer composition.

13. (Previously Presented). The blend of Claim 1, wherein, with the symbol i representing 1 or 2, the monomers B_i are selected from the group consisting of

(1) acrylic and methacrylic acid derivatives of the structure (VI)



where $\text{R}^1 = \text{H}$ or CH_3 and $\text{R}^2 = \text{H}$ or linear, branched or cyclic, saturated or unsaturated carbon chains having from 1 to 30 carbon atoms,

(2) vinyl compounds which preferably contain functional groups.

14. (Previously Presented) The blend of Claim 13, wherein the polymer blocks P(Bi) represent a copolymer of from 75 to 100% by weight of monomers from group (1)

and up to 25% by weight of monomers from group (2), the weight fractions adding up to 100.

15. (Previously Presented) The blend of Claim 1, further comprising

- an admixture of tackifier resins, at a weight fraction of up to 40% by weight based on the weight of the blend without said resins,
and/or an admixture of plasticizers, fillers, nucleators, expandants, compounding agents and/or aging inhibitors.

16. (Previously Presented) The blend of Claim 1, wherein said blend is processed further from the melt and is applied to a backing.

17. (Previously Presented) A pressure-sensitive adhesive tape having a pressure sensitive adhesive comprising the blend of Claim 1, the pressure-sensitive adhesive being present as a single-sided or double-sided film on a backing.

18. (Previously Presented) The blend of Claim 5, wherein LB2 is at least 10% smaller than LB1.

19. (Previously Presented) The blend of Claim 18, wherein LB2 is at least 20% smaller than LB1.